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NOTICE OF ALLOWANCE AND FEE(S) DUE

7590

10/06/2009

Platon N. Mandros
BURNS, DOANE, SWECKER & MATHIS, L.L.P.
P.O. Box 1404
Alexandria, VA 22313-1404

EXAMINER

CHOI, PETER H

ART UNIT

PAPER NUMBER

3623

DATE MAILED: 10/06/2009

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/729,800

12/06/2000

Kuniya Kaneko

032218-011

8148

TITLE OF INVENTION: DEMAND-PRODUCTION SCHEME PLANNING APPARATUS, AND STORAGE MEDIUM

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	01/06/2010

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
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or Fax (571)-273-2885**

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

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10/06/2009

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I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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nonprovisional

NO

\$1510

\$300

\$0

\$1810

01/06/2010

EXAMINER	ART UNIT	CLASS-SUBCLASS
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CHOI, PETER H

3623

705-008000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,

1 _____

(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

2 _____

3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

☐ Issue Fee

☐ Publication Fee (No small entity discount permitted)

☐ Advance Order - # of Copies _____

4b. Payment of Fee(s); (Please first reapply any previously paid issue fee shown above)

☐ A check is enclosed.

☐ Payment by credit card. Form PTO-2038 is attached.

☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.

☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____

Date _____

Typed or printed name _____

Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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EXAMINER

CHOI, PETER H

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Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 743 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 743 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Notice of Allowability	Application No.	Applicant(s)	
	09/729,800	KANEKO ET AL.	
	Examiner	Art Unit	
	PETER CHOI	3623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 7/28/09.
2. ☐ The allowed claim(s) is/are 1-3, 5-10, 12-15, 17-28, 36-40.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- * Certified copies not received: ____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date ____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| <p>1. <input type="checkbox"/> Notice of References Cited (PTO-892)</p> <p>2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</p> <p>3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date ____</p> <p>4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material</p> | <p>5. <input type="checkbox"/> Notice of Informal Patent Application</p> <p>6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date ____.</p> <p>7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment</p> <p>8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance</p> <p>9. <input type="checkbox"/> Other ____.</p> |
|---|--|

/Jonathan G. Sterrett/
Primary Examiner, Art Unit 3623

DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Alan Kopecki on September 22, 2009.

The application has been amended as follows:

1. (Currently Amended) A demand-supply scheme planning apparatus comprising:

first means for storing data regarding a cost and a time that are needed between a purchase step and a supply step of each demand-supply step of a supply chain and stock amount of items required in each demand-supply step, the supply chain including a plurality of demand-supply steps each having an order receipt step, an order placement step, a purchase step, and a supply step that are related to a commodity;

second means for inputting an order receipt scheme, which includes an order quantity, of a demand-supply step of the plurality of demand-supply steps that is located at a supply-side terminal of the supply chain;

third means for determining basic scheme data regarding the order receipt step, the order placement step, the purchase step, and the supply step of each of the plurality

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of demand-supply steps based on the inputted order receipt scheme and at least the stored data relating to the stock amount items required, for each demand-supply step, and distributes the order quantity among the plurality of demand-supply steps based on the basic scheme data of each demand-supply step, the third means determining an amount of order placement of each demand-supply step, based on at least an amount of order receipt, an amount of stock, and a target amount of stock allocated to each demand-supply step from the stock amount;

fourth means for calculating a profitability index of each demand-supply step of the supply chain based on the basic scheme data determined and the ~~cost and time~~ data stored by the first means;

fifth means for ~~making a change in a predetermined parameter of each demand-supply step in the third means, for varying the profitability index of each demand-supply step~~, adjusting the basic scheme of at least one demand-supply step by at least one of a) changing an initial distribution of the order quantity of the order receipt step, b) advancing or delaying at least a portion of an order amount of the order placement step, and c) changing a target amount of stock of items allocated to the demand-supply step from the stock amount, wherein the fourth means calculates a first profitability index for a first version of the supply chain before without making said changes in the ~~predetermined parameters~~ adjustments, and calculates a ~~second~~ an additional profitability index for each adjusted version of the supply chain after making said adjustment ~~said changes in the predetermined parameters~~; and

sixth means for establishing a demand-supply scheme for manufacturing the commodity by selecting the ~~first or the second calculated~~ version of the supply chain having the highest calculated profitability index.

2. (Original) An apparatus according to claim 1, wherein the commodity includes a product and a part.

3. (Currently Amended) An apparatus according to claim 1, wherein the commodity ~~include~~ includes a service.

4. (Canceled)

5. (Currently Amended) An apparatus according to claim ~~[[1]]~~ 4, wherein a ~~predetermined parameter to be changed includes the target amount of stock, and the~~ fifth means further adjusts the basic scheme of the at least one demand-supply step by changing ~~is for changing~~ the target amount of stock.

6. (Currently Amended) An apparatus according to claim 1, wherein the first means further stores data regarding an order-receivable amount of each demand-supply step, and the fifth means ~~changes~~ further adjusts the basic scheme of the at least one demand-supply step by changing a predetermined parameter regarding order receipt within the order-receivable amount.

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7. (Currently Amended) An apparatus according to claim 1, wherein the fifth means ~~is for~~ further adjusts the basic scheme of the at least one demand-supply step by changing a predetermined parameter that sets a starting timing of the order placement step.

8. (Currently Amended) A program stored on a computer readable medium, [[for]] the program having instructions for causing a computer to execute a demand-supply scheme planning method, comprising the steps of:

A) storing first data regarding a cost and a time that are needed between a purchase step and a supply step of each demand-supply step of a supply chain in which a plurality of demand-supply steps each having an order receipt step, an order placement step, a purchase step, and a supply step that are related to a commodity, and second data regarding stock amounts of items required in each demand-supply step;

B) inputting an order receipt scheme, which includes an order quantity, of a demand-supply step of the plurality of demand-supply steps that is located at a supply-side terminal of the supply chain;

C) determining basic scheme data regarding the order receipt step, the order placement step, the purchase step, and the supply step of each of the plurality of demand-supply steps based on the inputted order receipt scheme and at least the stored data relating to the stock amount of items required, for each demand-supply step;

D) determining an amount of order placement of each demand-supply step, based on at least an amount of order receipt, an amount of stock, and a target amount of stock allocated to each demand-supply step from the stock amount;

~~[[D)]~~ E) calculating a profitability index of a first version of the supply chain based on the scheme data determined and the first data determining a supply chain distribution scheme by distributing the order quantity among the plurality of demand-supply steps based upon the basic scheme data of each demand-supply step;

~~[[E)]~~ F) making a change in a predetermined parameter of each demand-supply step of step C for varying the profitability index of each demand-supply step, wherein step D comprises calculating a first profitability index for a first version of the supply chain before making said changes in the predetermined parameters, and calculating a second profitability index for a second version of the supply chain after making said changes in the predetermined parameters; and adjusting the basic scheme data of at least one demand-supply step by at least one of a) changing an initial distribution of the order quantity of the order receipt step, b) advancing or delaying at least a portion of an order amount of the order placement step, and c) changing a target amount of stock of items allocated to the demand-supply step from the stock amount;

~~[[F)]~~ G) establishing a demand-supply scheme for manufacturing the commodity by selecting the first or the second calculated version of the supply chain having the highest profitability index calculating a first profitability index for a first version of the supply chain distribution scheme in which said adjustment has not been made;

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[[G)] H) calculating an additional profitability index for each adjusted supply chain distribution scheme in which said adjustment has been made; and

[[H)] I) selecting the supply chain distribution scheme having the highest calculated profitability index as the supply chain distribution scheme to be used in manufacturing the commodity.

9. (Previously Presented) A program according to claim 8, wherein the commodity includes a product and a part.

10. (Previously Presented) A program according to claim 8, wherein the commodity include a service.

11. (Canceled)

12. (Currently Amended) A program according to claim **[[11)] 8** wherein step **[[E)] E** further comprises changing a predetermined parameter constituting the target amount of stock.

13. (Currently Amended) A program according to claim 8, further comprising:
storing data regarding an order-receivable amount of each demand-supply step; and

wherein step E further comprises changing a predetermined parameter relating to order receipt within the order-receivable amount.

14. (Currently Amended) A program according to claim 8, wherein step E further comprises changing a predetermined parameter that sets a starting timing of the order placement step.

15. (Previously Presented) A computer programmed to perform the program according to claim 8.

16. (Canceled)

17. (Currently Amended) A demand-supply scheme planning apparatus comprising:

first means for storing first data regarding a cost and a time that are needed between purchase of a product or a part and shipment of the product in each demand-supply step of a supply chain in which a plurality of demand-supply steps, second data regarding a transportation cost involved in the shipment of the product and a time needed for transportation of the product, and third data regarding ~~targets of stock~~ target stock amount of the product and the member of each demand-supply step, **[[and]]** fourth data regarding stock amounts of items required in each demand-supply step, and fifth data regarding an amount of order receipt wherein ~~the~~ each demand-supply step

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places an order for a product or a member for producing the product upon receiving an order for the product, and determines an amount of order placement based on at least an amount of order receipt, an amount of stock, and a target amount of stock, and **[[that]]** ships the product purchased in accordance with the order placed, or **[[that]]** produces and ships the product using the member purchased in accordance with the order placed;

second means for inputting stock records of the product and the member of each demand-supply step of the supply chain;

third means for inputting an order receipt scheme, which includes an order quantity, of the product of a demand-supply step located at a shipment-side terminal of the supply chain;

fourth means for calculating a first profitability index for a first version of the supply chain, ~~and a second profitability index for a second version of the supply chain after making a change in each demand-supply step of the supply chain~~ based on basic scheme data regarding order receipt, order placement, purchase and shipment of each demand-supply step, and the ~~first and second~~ data stored by the first means, and an additional profitability index for at least one second version of the supply chain after adjusting the basic scheme data of at least one demand-supply step by at least one of a) changing an initial distribution of the order quantity of the order receipt step, b) advancing or delaying at least a portion of an order amount of the order placement step, and c) changing a target amount of stock of items allocated to the demand-supply step from the stock amount

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fifth means for establishing a demand-supply scheme by selecting the ~~first or the second-calculated~~ version of the supply chain having the highest calculated profitability index.

18. (Original) An apparatus according to claim 17, wherein the fifth means determines a deviation between a value obtained by subtracting the order receipt scheme of the demand-supply step located at the shipment-side terminal from the stock record of the demand-supply step and the stock target value of the demand-supply step, as an amount of order placement, and distributing the amount of order placement as order placement to a demand-supply step where the order placement from the demand-supply step at the shipment-side terminal is possible, in such a manner that a profit increases, based on the first and the second data stored by the first means.

19. (Original) An apparatus according to claim 17, further comprising:

sixth means for setting an order receivable range of each demand-supply step based on a fourth data regarding a product order receivable range of each demand-supply step stored in data stored by the first means; and

seventh means for determining appropriateness of each demand-supply step based on the order receivable range set by the sixth means and the order receipt of each demand-supply step set by the fifth means.

20. (Original) An apparatus according to claim 19, wherein the seventh means determines whether a processing capability of each demand-supply step is excess or insufficient.

21. (Previously Presented) An apparatus according to claim 17, further comprising:

sixth means for setting an order receivable range of each demand-supply step based on a fourth data regarding a product order receivable range of each demand-supply step stored in data stored by the first means; and

seventh means for determining whether the order receipt of each demand-supply step used by the fifth means is within the order receivable range set for the corresponding demand-supply step by the sixth means; and

eighth means for, if the seventh means determines that the order receipt is not within the order receivable range, changing the scheme data used by the fifth means so that the order receipt of the demand-supply step subjected to the determination becomes within the corresponding order receivable range.

22. (Original) An apparatus according to claim 21, wherein the eighth means switches a portion or a whole amount of the order receipt of the demand-supply step subjected to the determination to order receipt of a demand-supply step that is capable of shipping a product identical to that shipped by the demand-supply step subjected to the determination.

23. (Previously Presented) An apparatus according to claim 21, wherein the seventh means changes, in time, at least an amount of the order receipt of the demand-supply step subjected to the determination relative to the order receipt scheme.

24. (Previously Presented) An apparatus according to claim 23, wherein the seventh means determines whether a sum of the changed order receipt and the order receipt used by the fifth means is within the order receivable range set by the sixth means, if the eighth means accomplishes order receipt changing, in time, at least an amount of the order receipt.

25. Original) An apparatus according to claim 21, wherein the eighth means changes at least a portion of the third data of each demand-supply step stored by the first means.

26. (Original) An apparatus according to claim 21, wherein the eighth means changes the scheme data so that the order receipt of each demand-supply step becomes within the corresponding order receivable range and so that the profitability index increase.

27. (Previously Presented) An apparatus according to claim 17, further comprising output means for outputting the scheme data used by the fifth means.

28. (Currently Amended) A program stored on a computer readable medium, ~~[[for]] the program having instructions for causing a computer to execute~~ a demand-supply scheme planning method comprising the steps of:

storing first data regarding a cost and a time that are needed between purchase of a product or a part and shipment of the product in each demand-supply step of a supply chain comprised of a plurality of demand-supply steps, second data regarding a transportation cost involved in the shipment of the product and a time needed for transportation of the product, ~~and~~ third data regarding targets of stock of the product and the member of each demand-supply step, and fourth data regarding stock amounts of items required in each demand-supply step, wherein each demand-supply step places an order for a product or a member for producing the product upon receiving an order for the product, and that ships the product purchased in accordance with the order placed or that produces and ships the product using the member purchased in accordance with the order placed;

inputting stock records of the product and the member of each demand-supply step of the supply chain;

inputting ~~an~~ a basic scheme for the order receipt scheme of the product of a step, order placement step, purchase step and supply step of each demand-supply step ~~located at a shipment-side terminal of the supply chain~~ in accordance with an order quantity and at least the stored data relating to the stock amount of items required;

determining an amount of order placement of each demand-supply step, based on at least an amount of order receipt, an amount of stock, and a target amount of stock allocated to each demand-supply step from the stock amount;

inputting a supply chain distribution scheme by distributing the order quantity among the plurality of demand-supply steps based on the basic scheme of each demand-supply step;

adjusting the basic scheme of at least one demand-supply step by at least one of a) changing an initial distribution of the order quantity of the order receipt step, b) advancing or delaying at least a portion of an order amount of the order placement step, and c) changing a target amount of stock of items allocated to the demand-supply step from the stock amount;

calculating a first profitability index of for a first version of the supply chain distribution scheme in which said adjustment has not been made; and a second profitability index for a second version of the supply chain after making a change in each demand-supply step of the supply chain, based on scheme data regarding order receipt, order placement, purchase and shipment of each demand-supply step, and the first and second data stored by the first means; and

establishing a demand-supply scheme by selecting the first or the second calculated version of the supply chain having the highest profitability index;

calculating an additional profitability index for each supply chain distribution scheme in which said adjustment has been made; and that has been adjusted; and

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selecting the supply chain distribution scheme having the highest calculated profitability index as the supply chain distribution scheme to be used in manufacturing the commodity.

Claims 29-35 (Canceled)

36. (Previously Presented) An apparatus according to claim 1, further comprising an adjustment means for adjusting a distribution of the scheme data regarding the order receipt step, the order placement step, the purchase step and the supply step for each of the plurality of demand-supply steps.

37. (Currently Amended) A program according to claim 8, wherein step F ~~G~~ further includes adjusting a distribution of the scheme data regarding the order receipt step, the order placement step, the purchase step and the supply step for each of the plurality of demand-supply steps.

38. (Currently Amended) An apparatus according to claim 17, wherein said fifth means further adjusts the scheme data regarding order receipt, order placement, purchase and shipment of each demand-supply step.

39. (Currently Amended) A program according to claim 28, ~~wherein the establishing step includes~~ further comprising a step of: adjusting the scheme data

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regarding order receipt, order placement, purchase and shipment of each demand-supply step.

40. (Currently Amended) A supply chain distribution scheme planning apparatus comprising:

a data storage portion that stores parameters for a plurality of demand-supply steps ~~in that form~~ a supply chain, wherein each demand-supply step includes an order receipt step, an order placement step, a purchase step, and a supply step, and wherein the stored parameters include stock amounts of items required in each demand-supply step;

a data input portion for inputting an order quantity;

a supply chain distribution scheme determining portion that determines a basic scheme for the order receipt step, order placement step, purchase step and supply step of each demand-supply step in accordance with the order quantity and at least one stored parameter, and determines a supply chain distribution scheme by distributing the order quantity among the plurality of demand-supply steps~~[[,]]~~ based on the basic scheme of each demand-supply step, the supply chain distribution scheme determining portion determining an amount of order placement of each demand-supply step, based on at least an amount of order receipt, an amount of stock, and a target amount of stock allocated to each demand-supply step from the stock amount;

an index calculating portion that calculates a profitability index of the supply chain distribution scheme based on the basic scheme determined by the supply chain

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distribution scheme determining portion for each demand-supply step ~~within~~ of the supply chain;

a basic scheme ~~adjusting~~ adjustment portion that ~~changes a predetermined parameter of each~~ adjusts the basic scheme of at least one demand-supply step ~~of the supply chain to change, the profitability index of the supply chain by~~ at least one of a) changing an initial distribution of the order quantity of the order receipt step, b) advancing or delaying at least a portion of an order amount of the order placement step, and c) changing a target amount of stock of items allocated to the demand-supply step from the stock amount, wherein the index calculating portion calculates a first profitability index for a first version of the supply chain ~~before making said changes in the predetermined parameters~~ distribution scheme in which the basic scheme adjustment portion has not made said adjustment, and calculates a second profitability index for a second version of the supply chain distribution scheme in which said adjustment has been made by the basic scheme adjustment portion; and

a selecting portion ~~for establish a demand-supply scheme for manufacturing the commodity by selecting the first or the second calculated version of the supply chain having the highest profitability index~~ that selects the supply chain distribution scheme having the highest calculated profitability index as the supply chain distribution scheme to be used in manufacturing a commodity.

2. The following is an examiner's statement of reasons for allowance:

The claims have been allowed in view of the arguments presented by Applicant in the response filed July 28, 2009. Specifically, Applicant argued that the prior art of record does not teach or disclose to vary parameters that vary the profitability of each demand-supply step of a supply chain (changing an initial distribution of the order quantity of the order receipt step, advancing or delaying at least a portion of an order amount of the order placement step, and changing a target stock amount of items allocated to the demand-supply step from the stock amount) and then use profitability as the controlling factor in the final selection. These elements have been incorporated into each of the independent claims.

Neither nor any of the prior art of record, taken individually or in any combination, fairly teach, inter alia, the combination of the steps of:

storing first data regarding a cost and a time that are needed between a purchase step and a supply step of each demand-supply step of a supply chain in which a plurality of demand-supply steps each having an order receipt step, an order placement step, a purchase step, and a supply step that are related to a commodity, and second data regarding stock amounts of items required in each demand-supply step;

inputting an order receipt scheme, which includes an order quantity, of a demand-supply step of the plurality of demand-supply steps that is located at a supply-side terminal of the supply chain;

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determining basic scheme data regarding the order receipt step, the order placement step, the purchase step, and the supply step of each of the plurality of demand-supply steps based on the inputted order receipt scheme and at least the stored data relating to the stock amount of items required, for each demand-supply step;

determining an amount of order placement of each demand-supply step, based on at least an amount of order receipt, an amount of stock, and a target amount of stock allocated to each demand-supply step from the stock amount;

determining a supply chain distribution scheme by distributing the order quantity among the plurality of demand-supply steps based upon the basic scheme data of each demand-supply step;

adjusting the basic scheme data of at least one demand-supply step by at least one of a) changing an initial distribution of the order quantity of the order receipt step, b) advancing or delaying at least a portion of an order amount of the order placement step, and c) changing a target amount of stock of items allocated to the demand-supply step from the stock amount;

calculating a first profitability index for a first version of the supply chain distribution scheme in which said adjustment has not been made;

calculating an additional profitability index for each adjusted supply chain distribution scheme in which said adjustment has been made; and

selecting the supply chain distribution scheme having the highest calculated profitability index as the supply chain distribution scheme to be used in manufacturing the commodity.

The best prior art of record, Lilly et al., does not explicitly vary parameters that vary the profitability of each demand-supply step of a supply chain (changing an initial distribution of the order quantity of the order receipt step, advancing or delaying at least a portion of an order amount of the order placement step, and changing a target stock amount of items allocated to the demand-supply step from the stock amount) and then use profitability as the controlling factor in the final selection. Lilly et al. further does not explicitly change work orders with profitability in mind, but rather to satisfy a scheduling due date. Lilly et al. also does not explicitly teach a profitability index for a particular order scheme that is used to select an adjusted version of the supply chain. Although Lilly et al. utilizes a “best fit” determination in order to select a scheme, profitability is not explicitly a factor driving the selection and evaluation criterion for scheme selection.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PETER CHOI whose telephone number is (571)272-6971. The examiner can normally be reached on M-F 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Beth Boswell can be reached on (571) 272-6737. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/P. C./
Examiner, Art Unit 3623
/Jonathan G. Sterrett/
Primary Examiner, Art Unit 3623